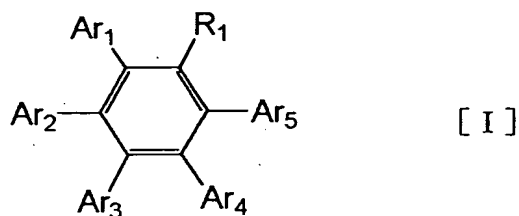


## CLAIMS

1. A condensed polycyclic compound represented by general formula [I]:

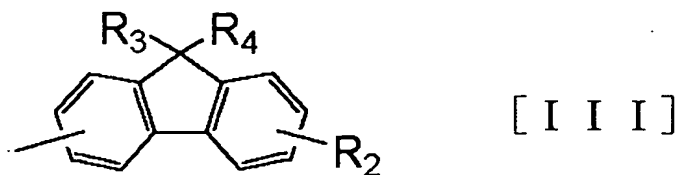


10 wherein R<sub>1</sub> is hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl, heterocyclic, each having no substituent or a substituent; and Ar<sub>1</sub> to Ar<sub>5</sub> are the same or different and are each independently a condensed polycyclic aromatic group or a condensed polycyclic heterocyclic group, each having no substituent or a substituent.

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2. The condensed polycyclic compound according to claim 1, wherein at least one of Ar<sub>1</sub> to Ar<sub>5</sub> is a condensed polycyclic aromatic group represented by general formula [III]:

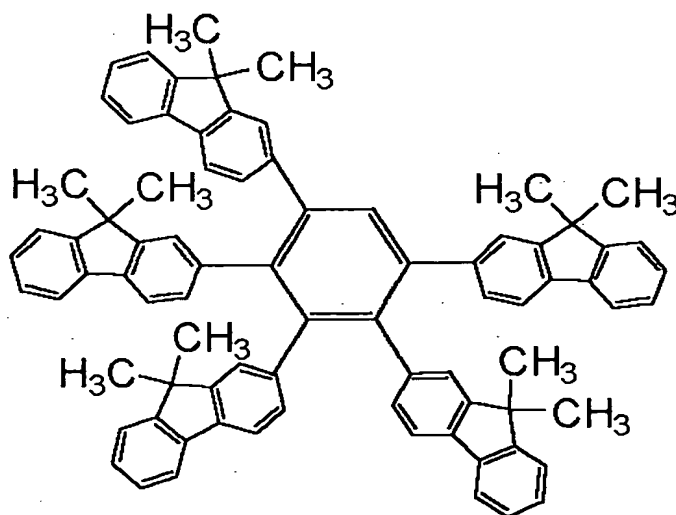
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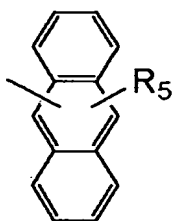
wherein R<sub>2</sub> is hydrogen, halogen, cyano, a substituted

amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; and  $R_3$  and  $R_4$  are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

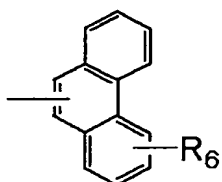
3. The condensed polycyclic compound according to claim 2 represented by the following structural formula.



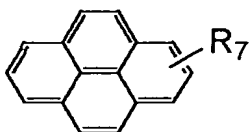
4. The condensed polycyclic compound according to claim 1, wherein at least one of  $Ar_1$  to  $Ar_5$  is a condensed polycyclic aromatic group represented by any of general formulas [IV] to [VII]:



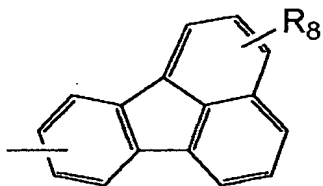
[IV]



[V]



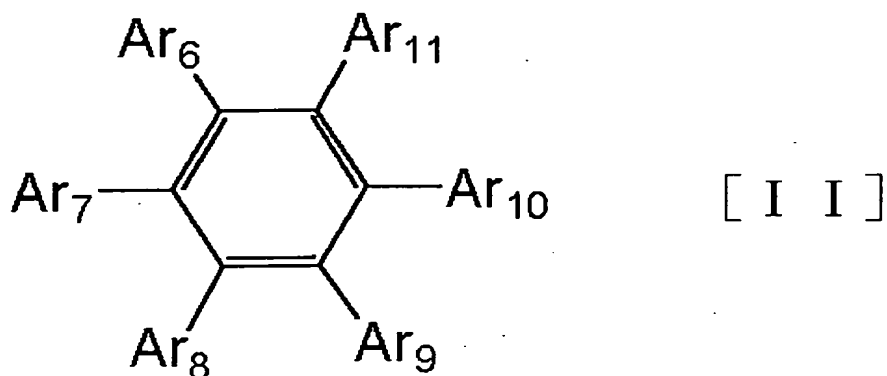
[VI]



[VII]

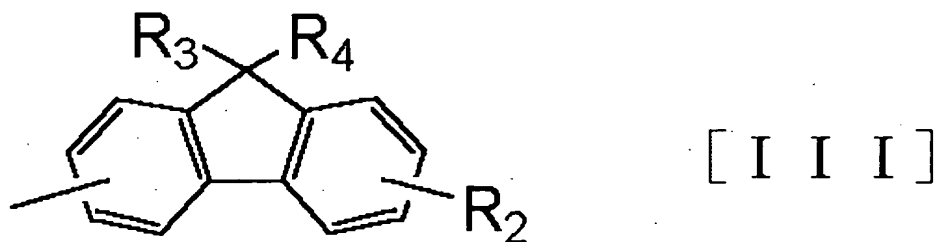
wherein R<sub>5</sub> to R<sub>8</sub> are hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic,  
 5 each having no substituent or a substituent.

5. A condensed polycyclic compound represented by general formula [II]:



wherein  $Ar_6$  to  $Ar_{11}$  are the same or different and are each independently a group selected from the group consisting of condensed polycyclic aromatic groups and condensed polycyclic heterocyclic groups, each having no substituent or a substituent.

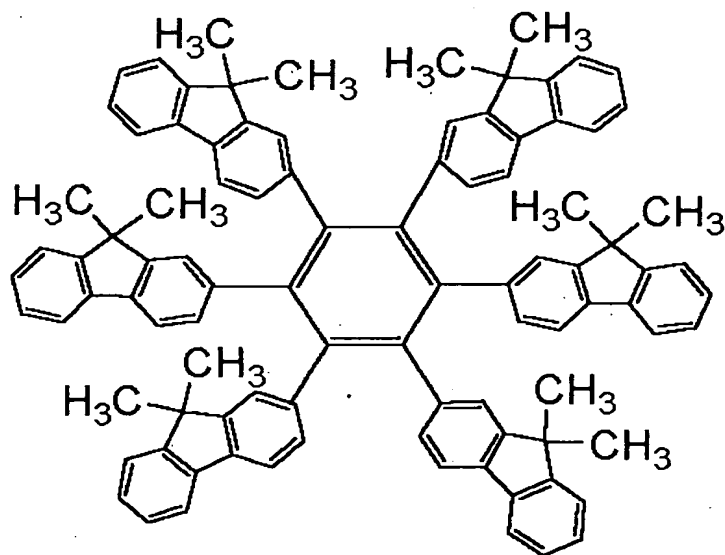
6. The condensed polycyclic compound according to claim 5, wherein at least one of  $Ar_6$  to  $Ar_{11}$  is a condensed polycyclic aromatic group represented by general formula [III]:



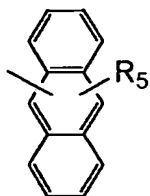
wherein  $R_2$  is hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having

no substituent or a substituent; and  $R_3$  and  $R_4$  are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

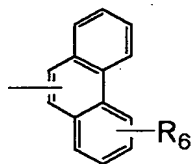
7. The condensed polycyclic compound according to claim 6 represented by the following structural formula.



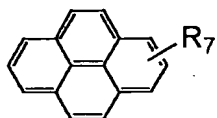
8. The condensed polycyclic compound according to claim 5, wherein at least one of  $Ar_1$  to  $Ar_5$  is a condensed polycyclic aromatic group represented by any of general formulas [IV] to [VII]:



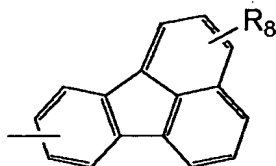
[IV]



[V]



[VI]



[VII]

wherein  $R_5$  to  $R_8$  are hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic,  
 5 each having no substituent or a substituent.

9. An organic light-emitting device comprising a pair of electrodes consisting of an anode and a cathode and one or a plurality of organic compound-  
 10 containing layers sandwiched between the pair of

electrodes, wherein at least one layer of the organic compound-containing layers contains at least one compound selected from the group consisting of the condensed polycyclic compounds according to claim 1.

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10. An organic light-emitting device comprising a pair of electrodes consisting of an anode and a cathode and one or a plurality of organic compound-containing layers sandwiched between the pair of electrodes, wherein at least one layer of the organic compound-containing layers contains at least one compound selected from the group consisting of the condensed polycyclic compounds according to claim 5.

15 11. The organic light-emitting device according to claim 9, wherein at least one layer of the organic compound-containing layers containing the condensed polycyclic compounds is an electron-transporting layer or a light-emitting layer.

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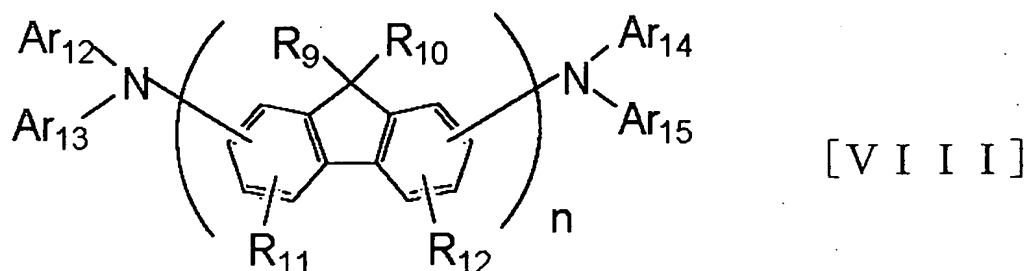
12. The organic light-emitting device according to claim 10, wherein at least one layer of the organic compound-containing layers containing the condensed polycyclic compounds is an electron-transporting layer or a light-emitting layer.

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13. The organic light-emitting device according

to claim 9, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [VIII]:

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wherein R<sub>9</sub> and R<sub>10</sub> are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R<sub>9</sub> combined to their respective fluorene structures are the same or different to each other; any pair of R<sub>10</sub> combined to their respective fluorene structures are the same or different to each other; R<sub>11</sub> and R<sub>12</sub> are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R<sub>11</sub> combined to their respective fluorene structures are the same or different to each other; any pair of R<sub>12</sub> combined to their respective fluorene structures are the same or different to each other;

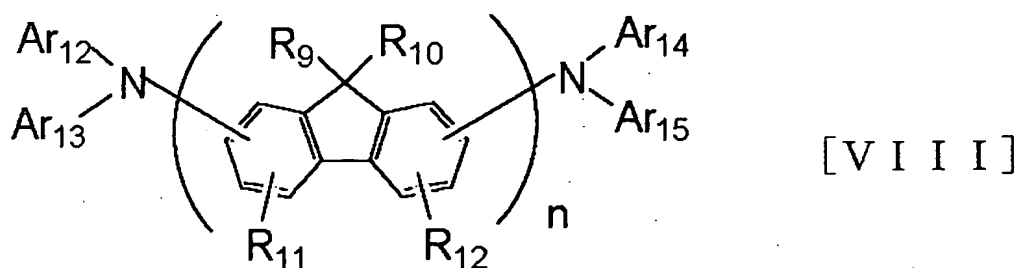


Ar<sub>12</sub>, Ar<sub>13</sub>, Ar<sub>14</sub> and Ar<sub>15</sub> are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic

5 heterocyclic, each having no substituent or a substituent, and Ar<sub>12</sub> and Ar<sub>14</sub> can be bonded to Ar<sub>13</sub> and Ar<sub>15</sub> respectively to form a ring; and n is an integer from 1 to 10.

10 14. The organic light-emitting device according to claim 10, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [VIII]:

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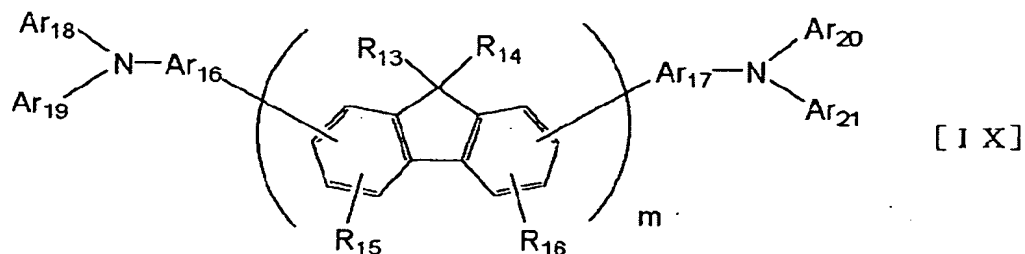


wherein R<sub>9</sub> and R<sub>10</sub> are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R<sub>9</sub> combined to their respective fluorene structures are the same or different to each other; any pair of R<sub>10</sub> combined

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to their respective fluorene structures are the same or different to each other;  $R_{11}$  and  $R_{12}$  are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of  $R_{11}$  combined to their respective fluorene structures are the same or different to each other; any pair of  $R_{12}$  combined to their respective fluorene structures are the same or different to each other;  $Ar_{12}$ ,  $Ar_{13}$ ,  $Ar_{14}$  and  $Ar_{15}$  are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and  $Ar_{12}$  and  $Ar_{14}$  can be bonded to  $Ar_{13}$  and  $Ar_{15}$  respectively to form a ring; and  $n$  is an integer from 1 to 10.

15. The organic light-emitting device according to claim 9, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [IX]:



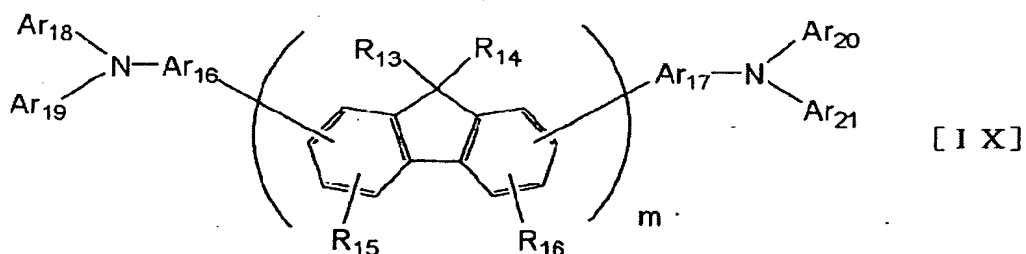
wherein  $R_{13}$  and  $R_{14}$  are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of  $R_{13}$  combined to their respective fluorene structures are the same or different to each other; any pair of  $R_{14}$  combined to their respective fluorene structures are the same or different to each other;  $R_{15}$  and  $R_{16}$  are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of  $R_{15}$  combined to their respective fluorene structures are the same or different to each other; any pair of  $R_{16}$  combined to their respective fluorene structures are the same or different to each other;  $Ar_{16}$  and  $Ar_{17}$  are the same or different and are each independently a divalent group selected from the group consisting of divalent aromatic and divalent

heterocyclic, each having no substituent or a substituent;  $Ar_{18}$ ,  $Ar_{19}$ ,  $Ar_{20}$  and  $Ar_{21}$  are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and  $Ar_{18}$  and  $Ar_{20}$  can be bonded to  $Ar_{19}$  and  $Ar_{21}$  respectively to form a ring; and  $m$  is an integer from 1 to 10.

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16. The organic light-emitting device according to claim 10, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [IX]:

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wherein  $R_{13}$  and  $R_{14}$  are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of  $R_{13}$  combined to their

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respective fluorene structures are the same or different to each other; any pair of  $R_{14}$  combined to their respective fluorene structures are the same or different to each other;  $R_{15}$  and  $R_{16}$  are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of  $R_{15}$  combined to their respective fluorene structures are the same or different to each other; any pair of  $R_{16}$  combined to their respective fluorene structures are the same or different to each other;  $Ar_{16}$  and  $Ar_{17}$  are the same or different and are each independently a divalent group selected from the group consisting of divalent aromatic and divalent heterocyclic, each having no substituent or a substituent;  $Ar_{18}$ ,  $Ar_{19}$ ,  $Ar_{20}$  and  $Ar_{21}$  are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and  $Ar_{18}$  and  $Ar_{20}$  can be bonded to  $Ar_{19}$  and  $Ar_{21}$  respectively to form a ring; and  $m$  is an integer from 1 to 10.